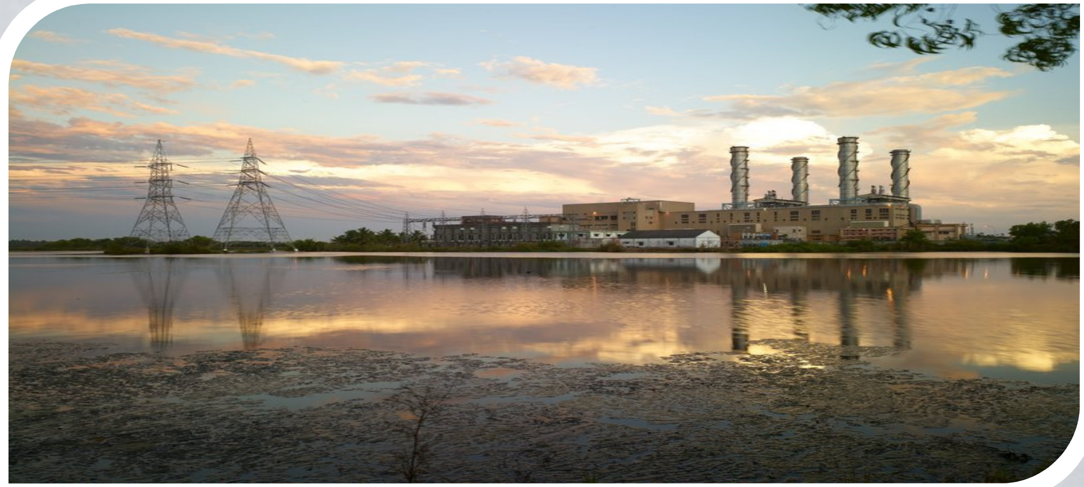
एनटीपीसी
NTPC
A Maharatna Company



8th Analysts & Investors Meet

Presentation by:

Sh. A.K. Singhal

Director (Finance)

01-Aug-2012

VISION AND TARGET

To be the world's largest and best power producer, powering India's growth

128,000 MW By 2032

Presentation outline

A Maharatna Company

- NTPC Journey & Overview
- Performance Highlights
- Opportunities
- Challenges
- Sustainability initiatives

एनटीपीसी NTPC

A Maharatna Company

एनटीपीसी NTPC

A Maharatna Company

Journey

1975 - Today

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Incorporated in 1975

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First Plant of 200 MW Commissioned at Singrauli in 1982

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Year 1990

10000 MW Mark Achieved in Installed Capacity

Year 1997
Navratna Status bestowed

Year 2002
20000 MW Mark Achieved

Year 2003
Commenced Construction of Hydro Power Project in Koldam

2004

Listed on Stock Exchanges

2004

Coal Blocks Allotted

2005

Rechristened as 'NTPC Limited'

2008

Gross Generation (Standalone) exceeded 200 BUs

A Maharatna Company

2009
Capacity crossed

30000 MW

2009

Strategic Leap –

Entered into Long Term Fuel Supply Agreements with Coal Co.s

2010

- Became 'Maharatna'
- GoI Disinvestment of 5% paid up capital

2011

Foray into Nuclear Power with JV formation with NPCIL

2011

First Unit of 660 MW of Sipat Commissioned

Currently 1980 MW Supercritical Capacity Commissioned

2012

- First Foray outside India, a JV in Trincomalee, Sri Lanka for Power Plant
- First 800 MW Unit Awarded
- Focus on Renewables

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Today

- Largest Power Generator in India
- Group Capacity 39174 MW
- Produces over 27% of India’s electricity

Energizing India through *PAN India Presence*

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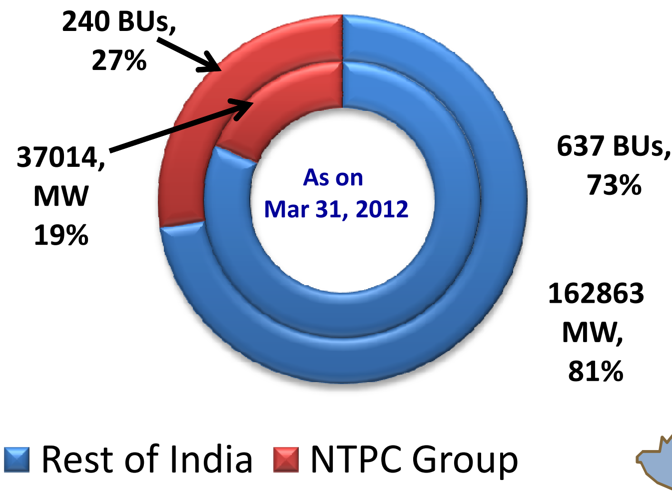
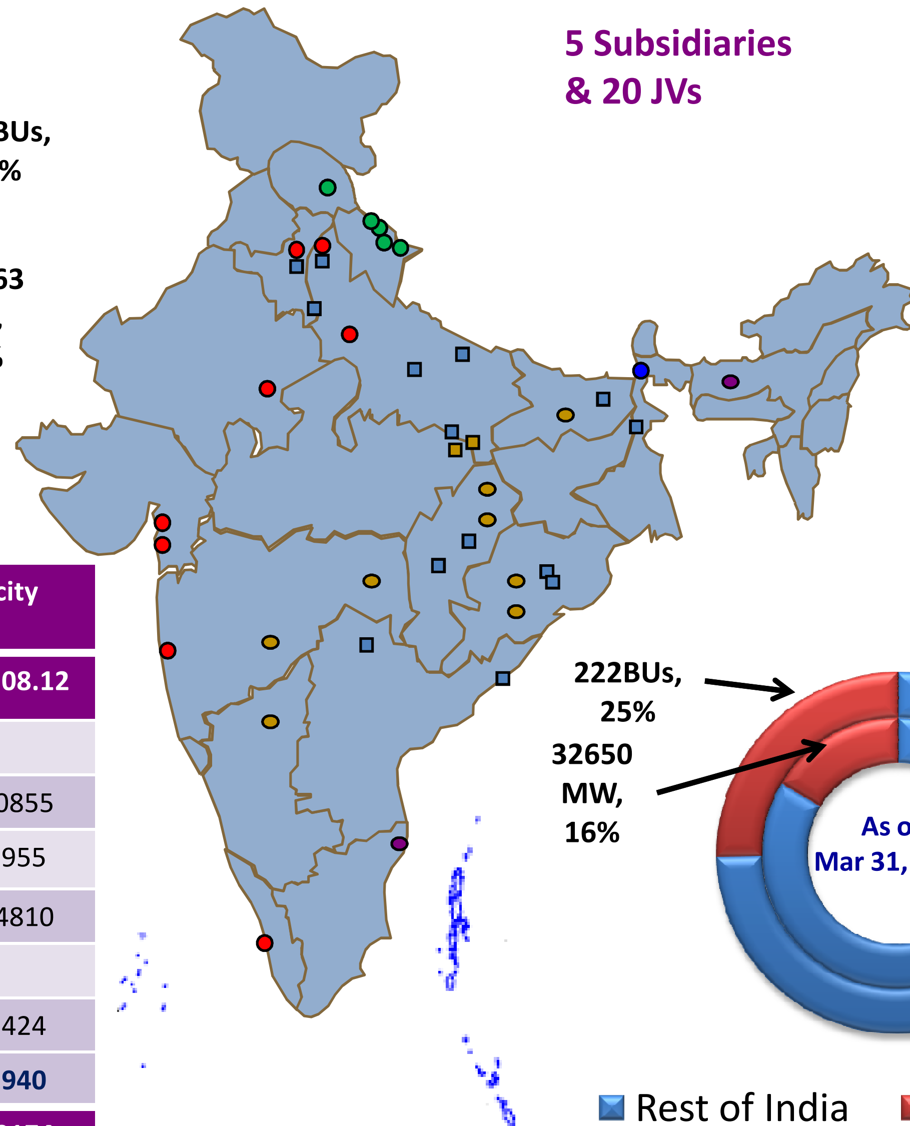
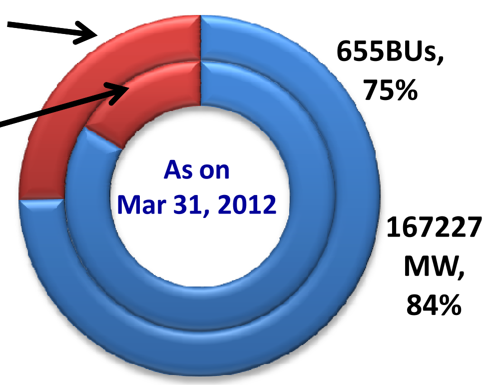




5 Subsidiaries
& 20 JVs

Shareholding
GoI: 84.50%
FIIs: 3.97%
DIIs: 7.77%
Others: 3.76%

	No. of Plants	Installed Capacity	
		31.03.12	01.08.12
NTPC Owned (MWs)			
Coal	16	28695	30855
Gas/ Liquid fuel	7	3955	3955
Total	23	32650	34810
Owned by JVs/subsidiaries (MWs)			
Coal	6	2424	2424
Gas	1	1940	1940
Total	**30**	**37014**	**39174**



Commercial Capacity as on 01.08.2012 : 36674MW

Group NTPC

5 Subsidiaries and 20 Joint Ventures

A Maharatna Company

Power Generation
- NTPC Hydro Ltd. (100%)*
- Kanti Bijlee Utpadan Nigam Ltd. (65%)
- Bhartiya Rail Bijlee Company Ltd. (74%)
- Aravali Power Company Pvt. Ltd. (50%)
- NTPC Tamil Nadu Energy Company Ltd. (50%)
- Nabinagar Power Generating Co. Pvt. Ltd. (50%)
- Meja Urja Nigam Pvt. Ltd. (50%)
- NTPC SAIL Power Company Pvt. Ltd. (50%)
- Ratnagiri Gas and Power Pvt. Ltd. (31.52%)
- Anushakti Vidyut Nigam Ltd. (49%)
- Trincomalee Power Company Ltd. (50%)
- Pan-Asian Renewables Pvt. Ltd. (50%)

Services
- NTPC Electric Supply Company Ltd. (100%)
- Utility Powertech Ltd. (50%)
- NTPC Alstom Power Services Pvt. Ltd. (50%)
- National High Power Test Laboratory Pvt. Ltd. (20%)
- Energy Efficiency Service Limited (25%)

Equipment Manufacturing
- NTPC BHEL Power Projects Pvt. Ltd. (50%)
- BF NTPC Energy Systems Ltd. (49%)
- Transformers and Electricals Kerala Ltd. (44.6%)

Coal Acquisition
- International Coal Ventures Pvt. Ltd. (14.28%)**
- NTPC SCCL Global Ventures Pvt. Ltd. (50%)
- CIL NTPC Urja Pvt. Ltd. (50%)

Power Trading
- NTPC Vidyut Vyapar Nigam Ltd. (100%)
- National Power Exchange Ltd. (16.67%)

Subsidiaries

Joint Ventures

Figures in brackets indicate holding of NTPC as on 31.07.2012

*NTPC Hydro Limited is under merger with NTPC
**NTPC has resolved to withdraw from ICVL with the approval of MoP.

Three Major Issues Before NTPC

- **Fuel Linkages for New Capacities**
- **Financial Status of Distribution Companies**
- **Land Acquisition**

Presentation outline

- NTPC Journey & Overview
- **Performance Highlights**
- Opportunities
- Challenges
- Sustainability initiatives

Performance Highlights – 2011-12

•Highest ever capacity of 2820 MW added during the year

•Exceeded 11th Plan target of 9220 MW capacity addition by adding 9610 MW

•1160 MW brought to commercial operation. First 660 MW supercritical unit commissioned at Sipat

•AVF of 88.35%, PLF of 85%

•222.068 BUs of electricity generated during the year

•Net Sales crossed Rs. 60000 crore mark- Total revenue Rs. 64830.65 crore

•5th Largest amongst listed companies in terms of Profit after Tax- Rs. 9223.73 crore

•Highest ever CAPEX of Rs. 15954 crore on stand alone basis

•Group capex of Rs. 19934 crore incurred

•Highest ever dividend for a year @ 40% (incl. proposed final dividend)

Performance Highlights – 2012-13 so far..

- **Commissioned 2160 MW capacity (NTPC Group)**
- **2320 MW declared commercial (NTPC Group)**
- **Higher domestic coal materialisation at 98.3% of ACQ**
- **Profit After Tax increases by 20% Q-o-Q to Rs. 2499 crore.**
- **Total revenue increases by 11% to Rs.16844.89 crore**
- **Capex of Rs. 3978 crore incurred against target of Rs. 3967 crore.**

Performance Highlights…growth story

Healthy CAGR

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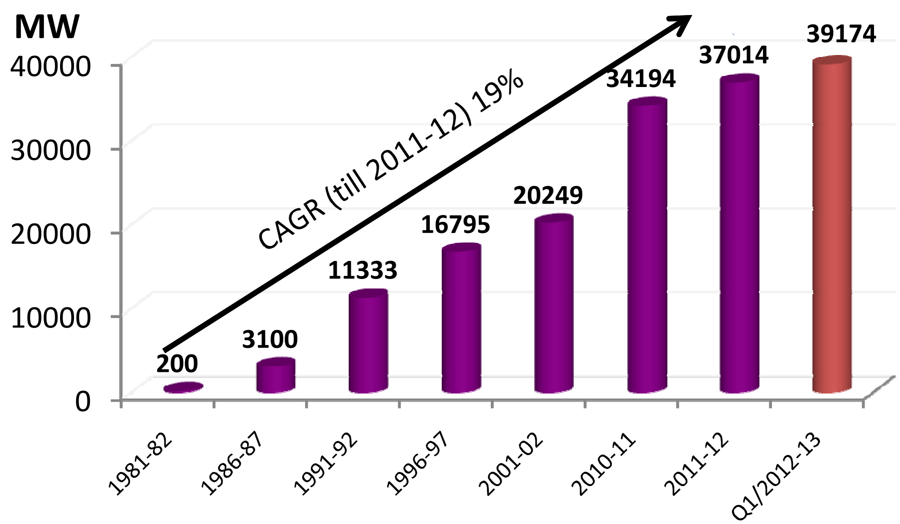
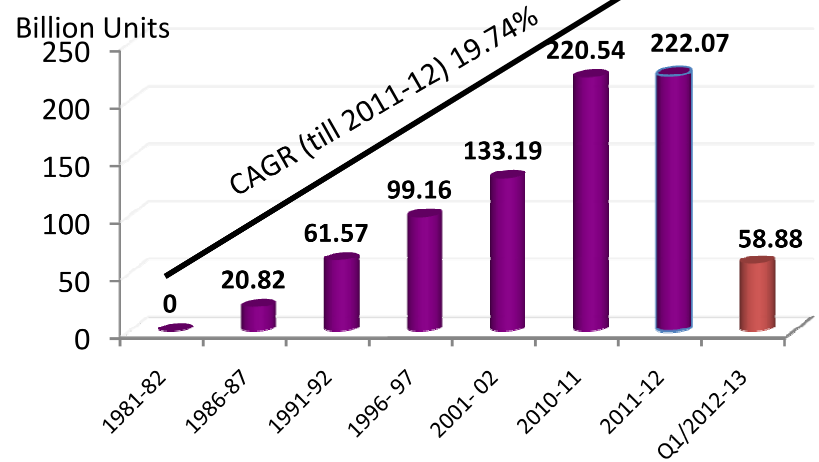
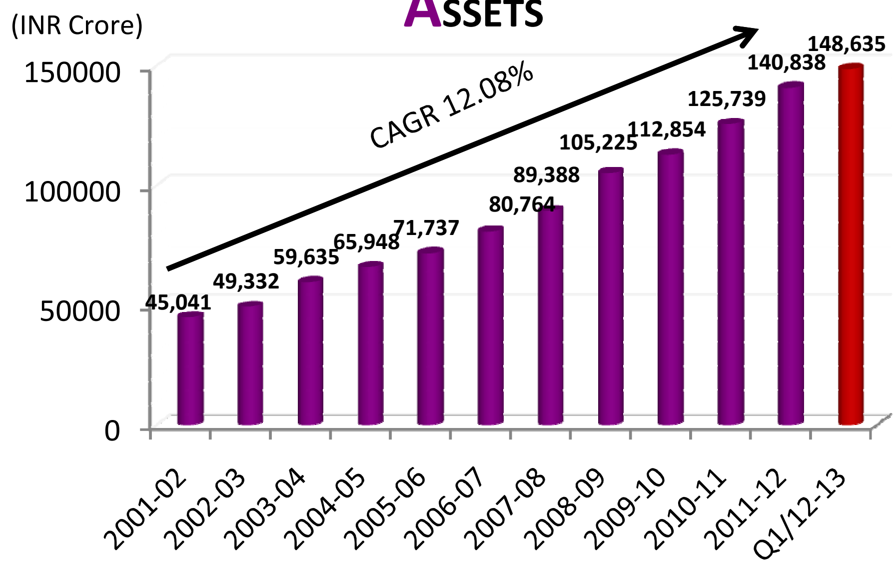
CAPACITY *(Group)*



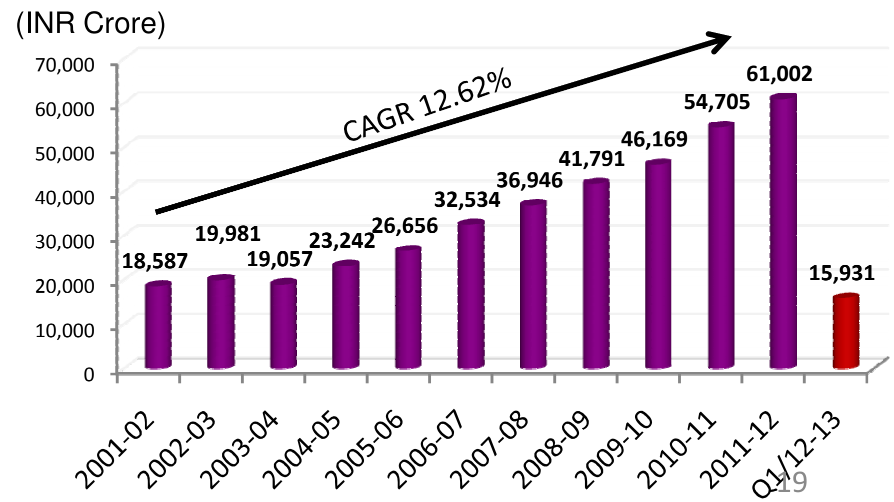
GENERATION



ASSETS



REVENUE - Sale of Energy



Performance Highlights…..

Sustained PAT, PBT, Net Worth & DPS

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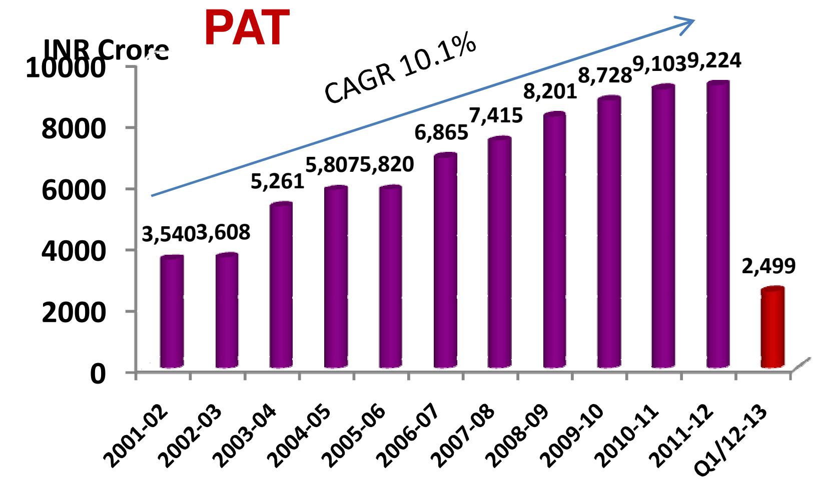
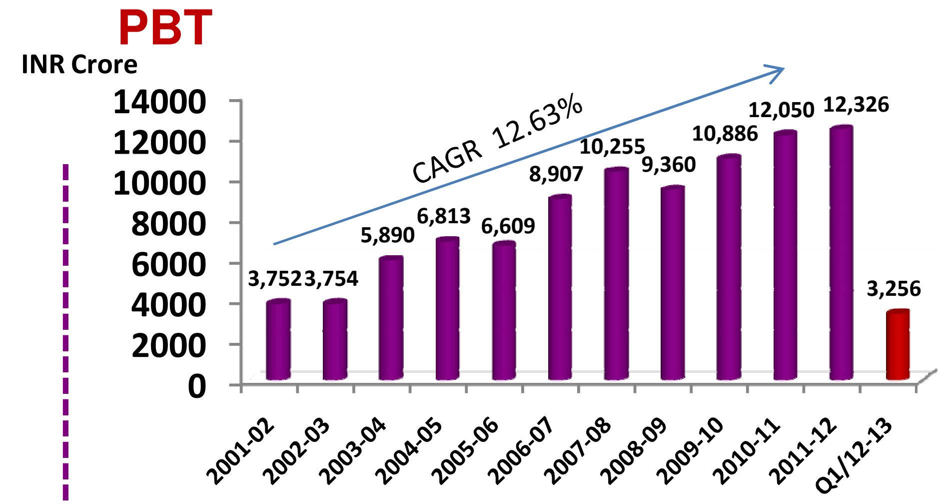
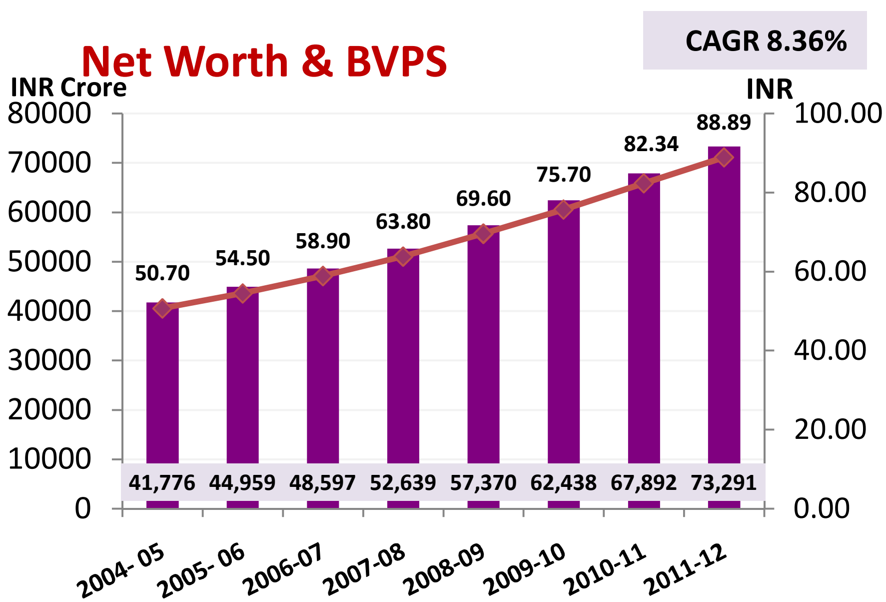
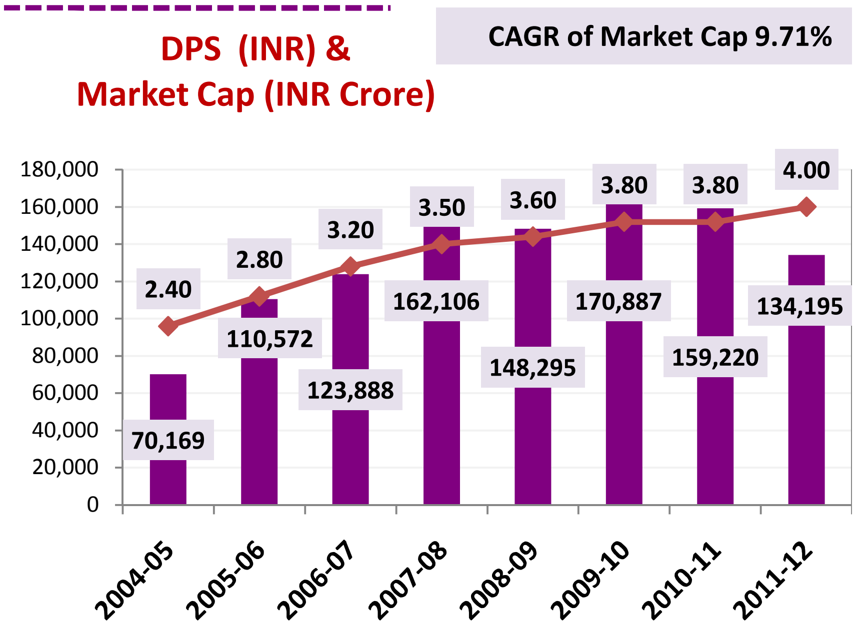








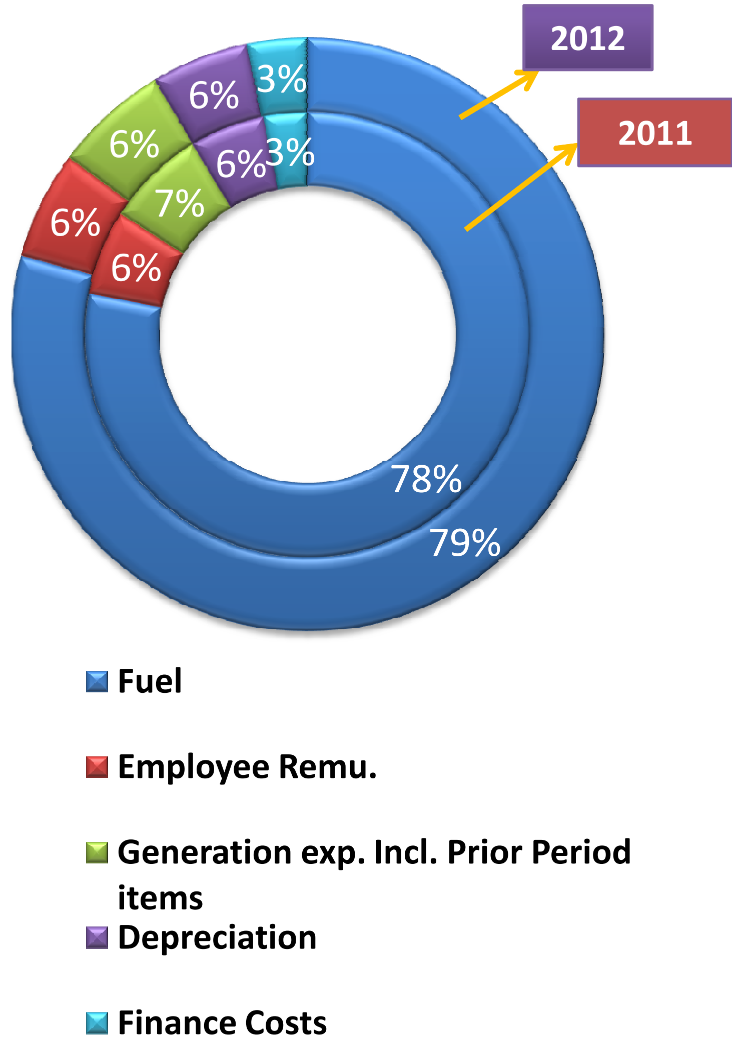
Highest ever dividend paid @ 40% in 2011-12 (including proposed final dividend)

Performance Highlights:

YOY Profitability

₹ Crore

	2011-12 (Audited)	2010-11 (Audited)	Y-O-Y
Total Income	**64,830.65**	**57,407.30**	**13%**
Revenue from Operations (net)	62,052.23	55,062.65	13%
Other income	2,778.42	2,344.65	19%
Total Expenditure	**52,504.49**	**45,357.70**	**16%**
Fuel	41,635.46	35,373.78	18%
Employee Remu.	3,090.48	2,789.71	11%
Generation exp. Incl. Prior Period items	3,275.21	3,287.56	0%
Depreciation	2,791.70	2,485.69	12%
Finance Costs	1,711.64	1,420.96	20%
PBT	12,326.16	12,049.60	2%
Tax	3,102.43	2,947.01	5%
PAT	**9,223.73**	**9,102.59**	**1%**



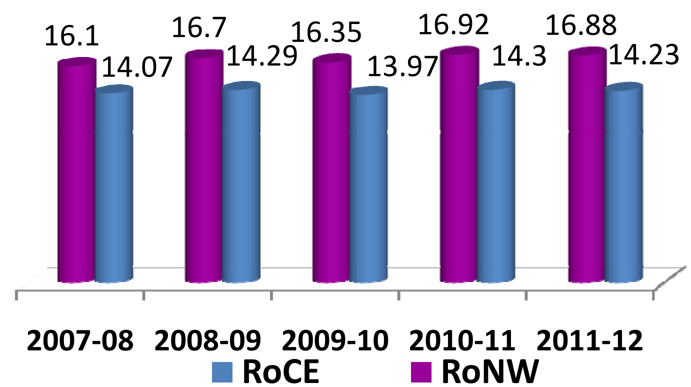
Performance Highlights:
Y-o-Y Financials

A Maharatna Company

₹ Crore

	2011-12 (Audited)	2010-11 (Audited)	Y-O-Y
Gross fixed assets	81,830.26	72,755.15	12%
Net block	**45,258.36**	**39,235.96**	**15%**
CWIP	41,827.86	35,495.33	18%
Investments - Non Current	9,583.92	10,532.84	-9%
Other Long Term Loans & adv & Non Current Assets	5,255.14	4,361.11	21%
Current Assets	38,912.52	36,113.64	8%
TOTAL	**140,837.80**	**125,738.88**	**12%**
Equity sh. Capital	8,245.46	8,245.46	0%
Reserves & Surplus	65,045.71	59,646.79	9%
Net worth	**73,291.17**	**67,892.25**	**8%**
Deffered Revenue	1,430.06	854.48	**67%**
Long term borrowings excl current maturities	45,908.27	39,735.68	16%
Deferred Tax Liabilities	636.90	602.95	6%
Other Long Term Liabilities & Provisions	2,332.76	2,612.48	-11%
Current Liab. & Prov .	17,238.64	14,041.04	23%
TOTAL	**140,837.80**	**125,738.88**	**12%**

Consistent & High RoCE & RoNW



RoCE: Return on Capital Employed
RoNW: Return on Net Worth

Highest ever CAPEX of Rs 15954 crore on stand alone basis

Group capex of Rs 19934 crore incurred

Performance Highlights:

Financials Q1/2012-13 Vs Q1/2011-12

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Income Statement

	Q1/2012-13 (Unaudited)	Q1/2011-12 (Unaudited)	Q-O-Q
Total Income	**16844.89**	**15167.89**	**11%**
Revenue from operations (net)	16165.95	14490.91	12%
Other income	678.94	676.98	0%
Total Expenditure	**13588.96**	**12320.74**	**10%**
Fuel	10597.72	9749.82	9%
Employee benefit exp	790.67	690.72	14%
Generation exp. Incl. Prior Period items	941.00	864.75	9%
Depreciation	760.22	641.13	19%
Finance costs	499.35	374.32	33%
PBT	**3255.93**	**2847.15**	**14%**
Tax	757.26	771.37	-2%
PAT	**2498.67**	**2075.78**	**20%**

Position Statement

₹ Crore

	Q1/2012-13 (Unaudited)	Q1/2011-12 (Unaudited)	Q-O-Q
Gross fixed assets	87779.23	73216.17	20%
Net block	**50333.32**	**39008.5**	**29%**
CWIP	40118.41	37651.15	7%
Investments - Non Current	9744.36	10656.11	-9%
Other Long Term Loans & Non Current Assets	9,417.82	4,740.71	99%
Current Assets	39,020.75	36,668.88	6%
TOTAL	**148,634.66**	**128,725.35**	**15%**
Equity sh. Capital	8,245.46	8,245.46	0%
Reserves & Surplus	67,544.37	61,722.57	9%
Net worth	**75,789.83**	**69,968.03**	8%
Deffered Revenue	2,179.91	854.47	155%
Long Term Borrowings	49,516.39	40,255.43	23%
Deferred Tax Liabilities	711.83	561.11	27%
Other Long Term Liabilities & Provisions	2,562.81	3,360.94	-24%
Current Liab. & Prov .	17,873.89	13,725.37	30%
TOTAL	**148,634.66**	**128,725.35**	**15%**

Performance Highlights:
Q1 indicators auguring well..

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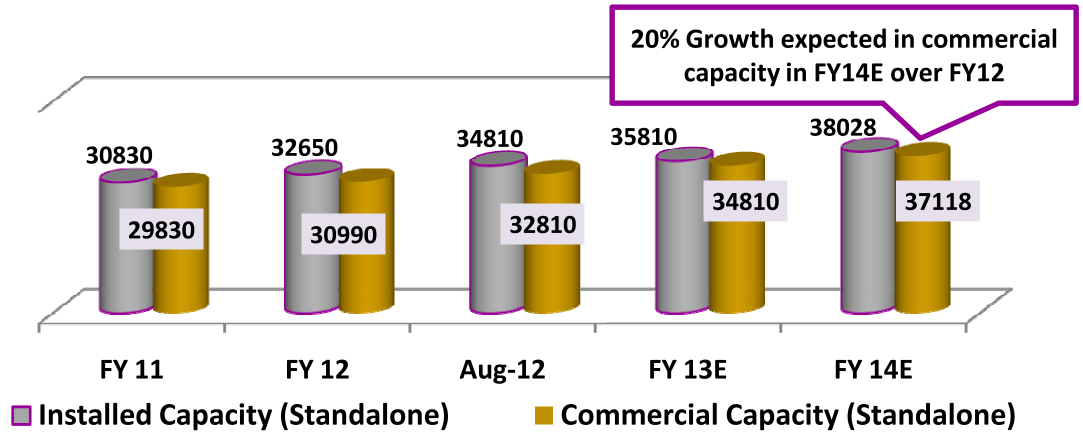
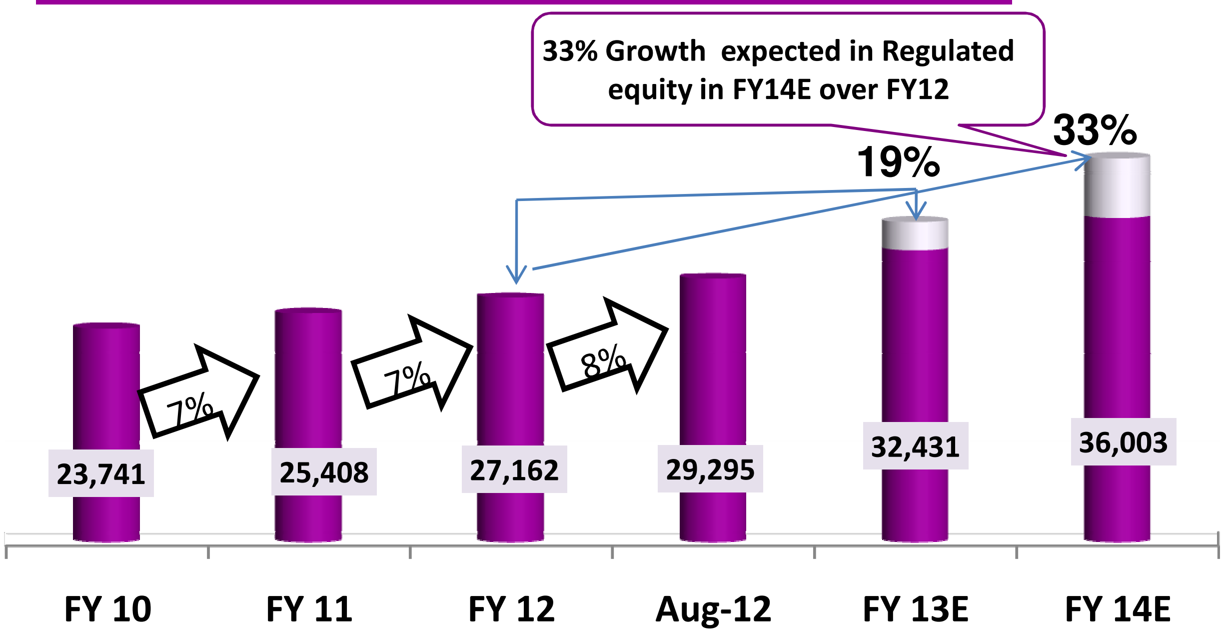
Capacity Growth (Standalone NTPC) MW



Commercial Capacity excl. Barh 660 MW and Bongaigoan 250MW

Growth in Regulated Equity (Rs. Crore)



Investments on track

- Capex of Rs 3978 crore during Q1 against target of Rs 3967 crore
- Q1 Capex 83% higher than corresponding Qtr last year
- CWIP of Rs. 44972.78 crore as on 30.06.2012
- Group Companies incurred capex of Rs 4721 crore

Stations	Capacity (MW)
As on 31.03.12	30990
CoD till Aug'2012	
Farakka	500
Sipat I	1320
Total	32810
CoD in remaining FY13 E	
Simhadri, Mauda, Rihand, VSTPS	2000
CoD in FY 14E	
Rihand, VSTPS, Mauda, Koldam, +8MW hyd	2308
Total commercial capacity FY 14E	**37118**

Performance Highlights – Operational

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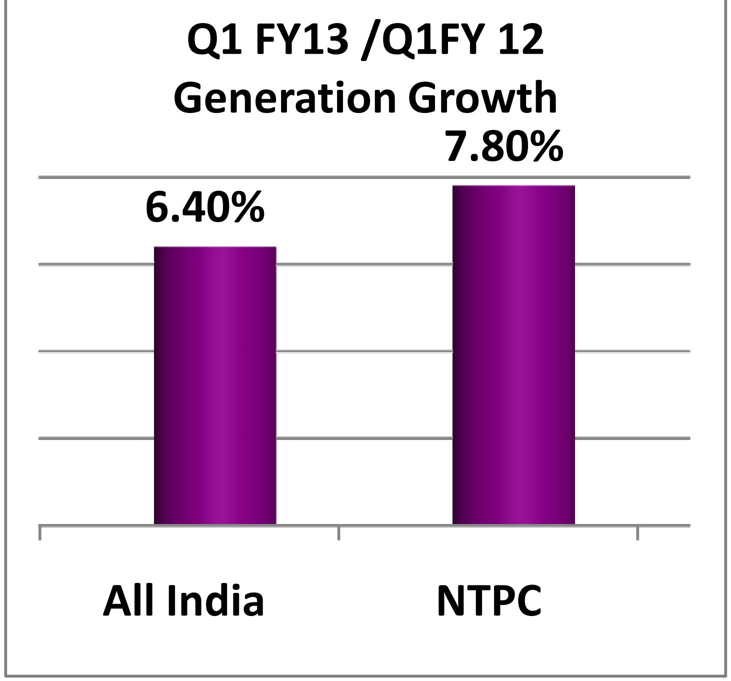
2011-12

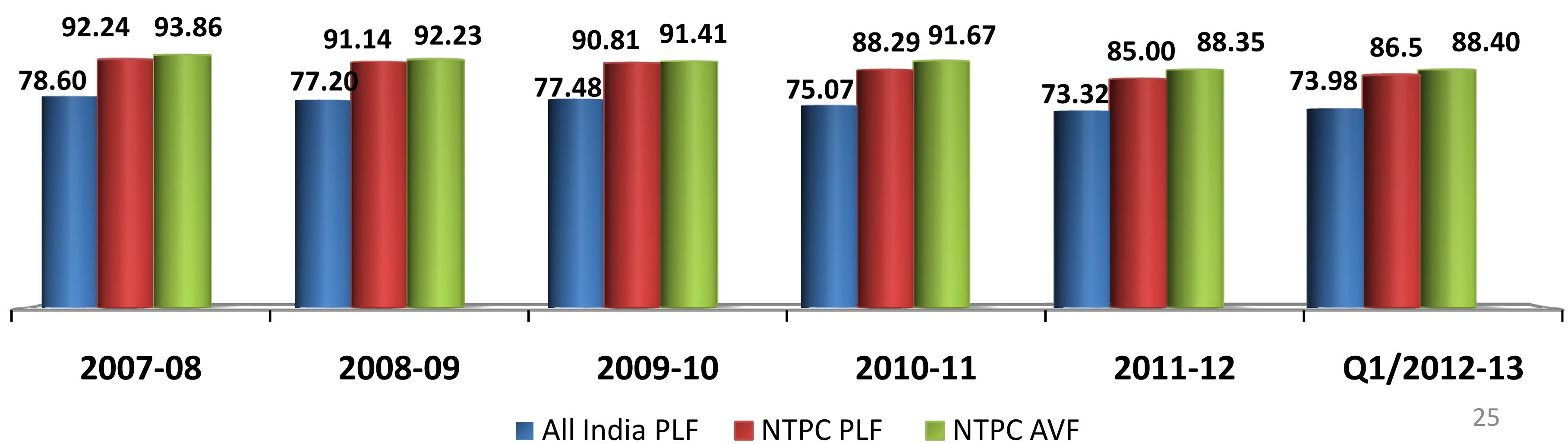
- Availability Coal Stations : 88.35% (2010-11 : 91.67%)
- Availability Gas Stations : 93.81% (2010-11 : 92.60%)

- PLF of Coal Stations : 85% (2010-11: 88.29%)
- All India PLF for coal stations : 73.32% *(CEA)*

Q1/2012-13

- AVF of Coal Stations: 88.40% (Q1/2011-12: 89.89%)
- AVF of Gas Stations: 92.63% (Q1/2011-12: 89.83%)
- PLF of Coal Stations: 86.45% (Q1/2011-12: 86.85%)
- All India PLF for coal Stations: 73.98% *(CEA)*





Group Companies Contribution in 2011-12

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Generation Contribution : 18 Bus (excl. 2.7 BUs captive power)

Capacity Contribution: 4364 MW,

(To reach 7254 MW capacity by FY17E)

Total Investments in JVs (excl PTC) and Subsidiaries: Rs. 4661 crore, 17% increase over PY

Total Revenue Contribution to Consolidated Total Revenue: Rs. 4000 Crore, 54% jump over PY

PAT Contribution to Consolidated PAT: Rs. 591 Crore, 141% jump over PY

Dividend Received: Rs 79 Crore (PY Rs. 35 Crore), jump of 226%, (Dividend expected in FY 13 Rs. ~129 Crore)

Steadily increasing Operating Cash Flows…

…progressively deployed in Generating Assets

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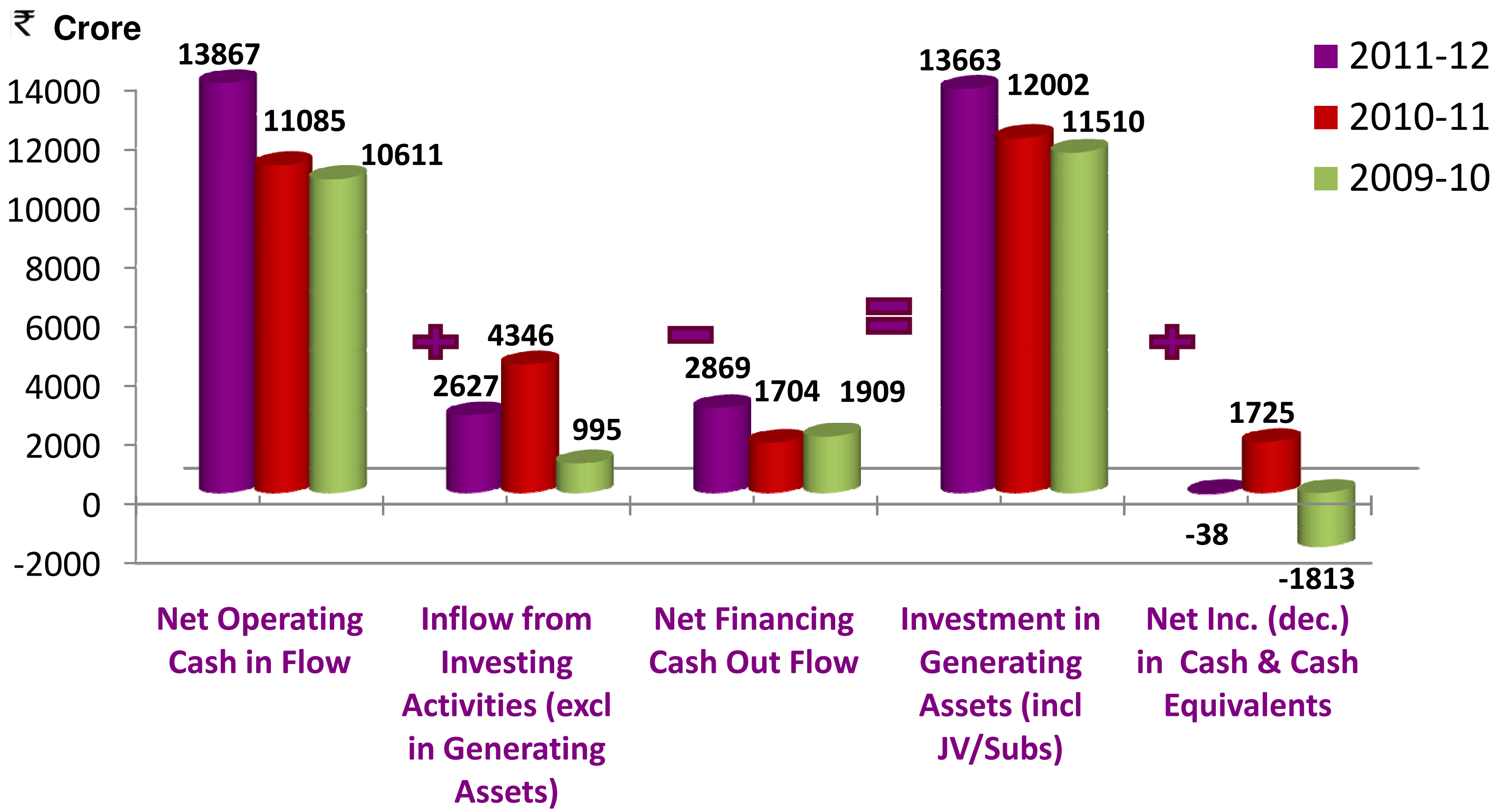

During 2011-12, cash invested in Generation Assets increased by 13.84%

Cash & Cash Equivalents :

- Rs. 16,146 Crore as on 31.03.12
- Rs. 16,185 Crore as on 31.03.11
- Rs. 14,460 Crore as on 31.03.10

Performance Highlights- Human Capital

Improving Productivity per employee….

NTPC
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	2007-08	2011-12	
Sales Per Employee	Rs.1.56 Crs	Rs. 2.54 Crs	Up 63%
PAT Per Employee	Rs 0.31 Crs	Rs. 0.38 Crs	Up 23%
Value Added Per Employee	Rs. 0.54 Crs	Rs. 0.82 Crs	Up 53%
Generation Per Employee	8.48 MUs	9.25 MUs	Up 9%
Man MW Ratio	0.87	0.74	Down 15%

Ranked 3rd in The Economic Times Best Employers in India 2012 Study of Best Employers in the country

Presentation outline

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Opportunities: The Growth Canvas

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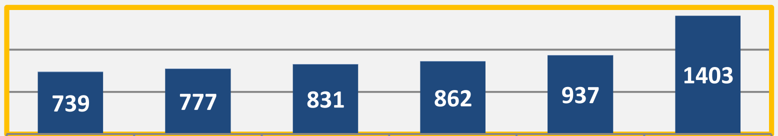
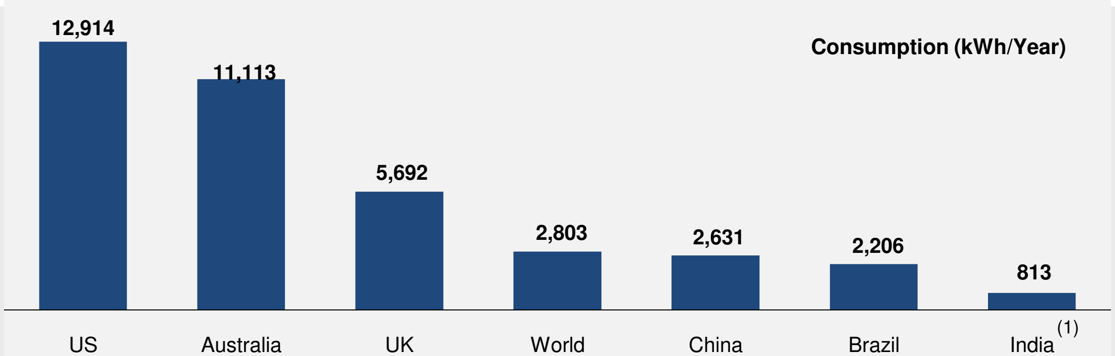
Robust Demand Growth



	FY08	FY09	FY10	FY11	FY12	FY17
Real GDP growth	9.30%	6.70%	8.40%	8.40%	6.50%	
Y-O-Y Demand growth	6.95%	5.14%	6.95%	3.73%	8.72%	
Energy Demand(BUs)	739	777	831	862	937	1403

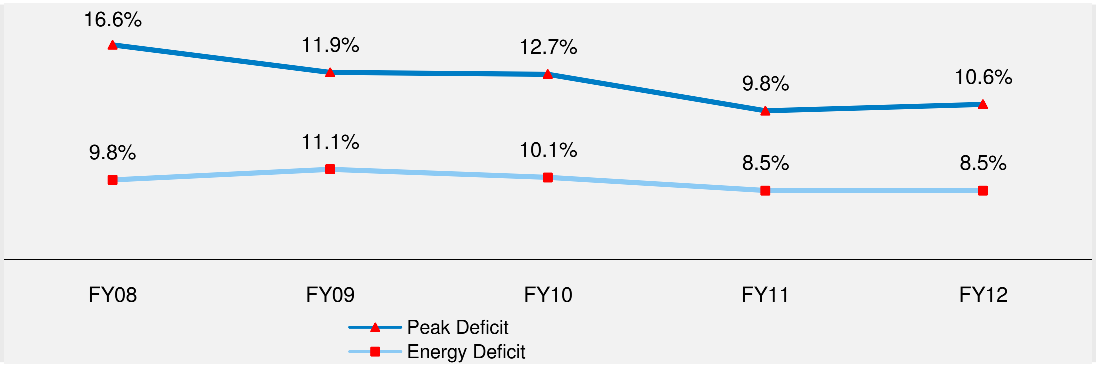
- Energy demand growth closely linked to GDP growth
- Demand to increase by c. 1.5 times by FY17

Per Capita Consumption Lags the World



- Notwithstanding sustained demand, India Continues to be among the lowest per capita consumers of Electricity globally, lagging China by over 3:1
- Per capita consumption c. 29% of the world average

Energy Deficit Scenario Continues



- Power deficit scenario has sustained despite capacity addition
  - 8.5% Energy Deficit in FY12
  - 10.6% Peak Deficit in FY12

Sources: Government of India Economic Survey 2011-12; CEA; World Bank Development Report, 2012; CEA Executive Summary, March 2012; Ministry of Power Annual Report 2009-10; Economic Survey 2010-11, Energy Demand: http://www.cea.nic.in/reports/monthly/executive_rep/apr12/25-26.pdf, Working Group on Power for 12th Plan Report , FY denotes year ending March 31.

((1) Per Capita consumption for India for FY09 (March 2009). For others, per capita consumption for CY08.

Capacity Expansion in XII Plan

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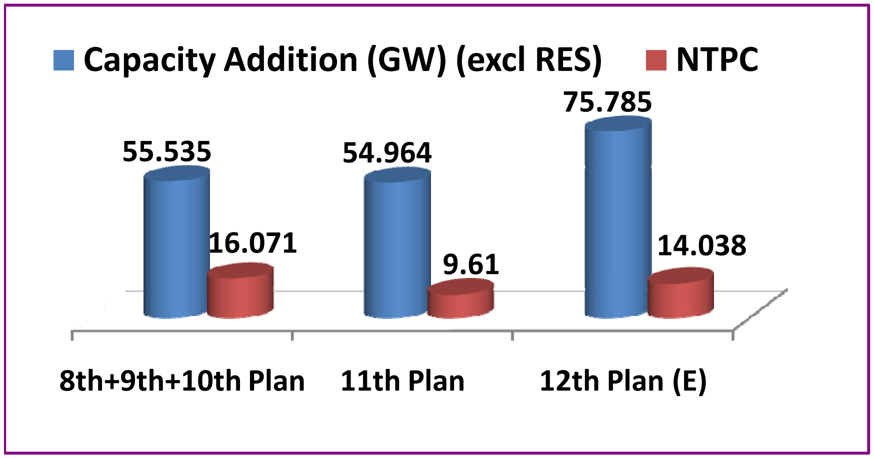

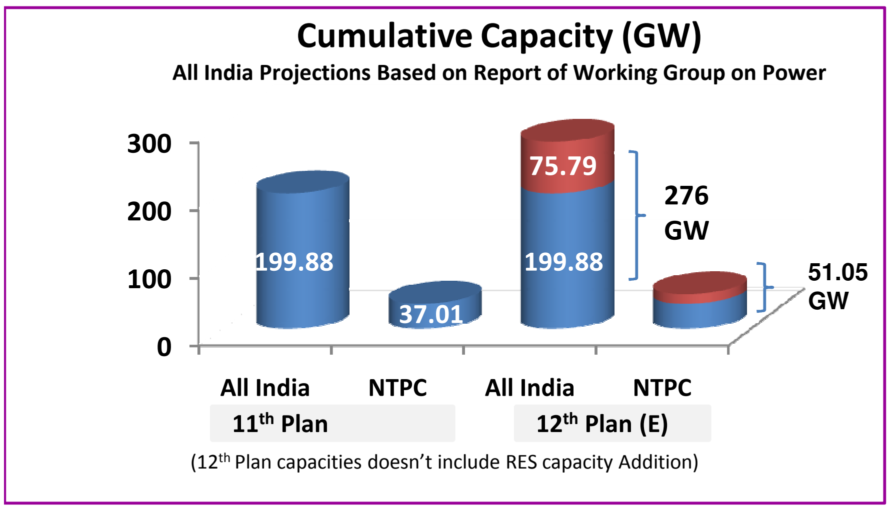

Source: Working Group on Power for XII Plan

XII plan NTPC Own capacity: 11148 MW
XII Plan Capacity thru JVs/Subs: 2890 MW

Year	Project	MW
FY 13	Sipat	660
	Mauda – II	1000
	Vindhyachal – IV & V	1000
	Rihand – III	500
	Indira Gandhi STPP JV	500
	Vallur – I, Phase – I & II JV	500
	Solar PV (A&N, Dadri)	10
	Total FY 13	**4170**
FY14	Rihand – III	500
	Bongaigaon	250
	Barh-II	660
	Koldam	800
	Singrauli Hydel	8
	Vallur – I, Phase – I & II JV	500
	Total FY 14	**2718**
FY 15	Bongaigaon	500
	Barh-II	660
	Barh-I	660
	Tapovan Vishnugarh Hydel	520
	Nabinagar JV	500
	Kanti - SUbsidiary	390
	Total FY 15	**3230**
FY 16	Barh-I	1320
	Vindhyachal – V	500
	Kudgi	800
	Nabinagar JV	500
	Total FY 16	**3120**
FY 17	Kudgi	800
	TOTAL XII PLAN	**14038**

NTPC - Capacity Addition Plans

Long Term Plan to become 128 GW by 2032

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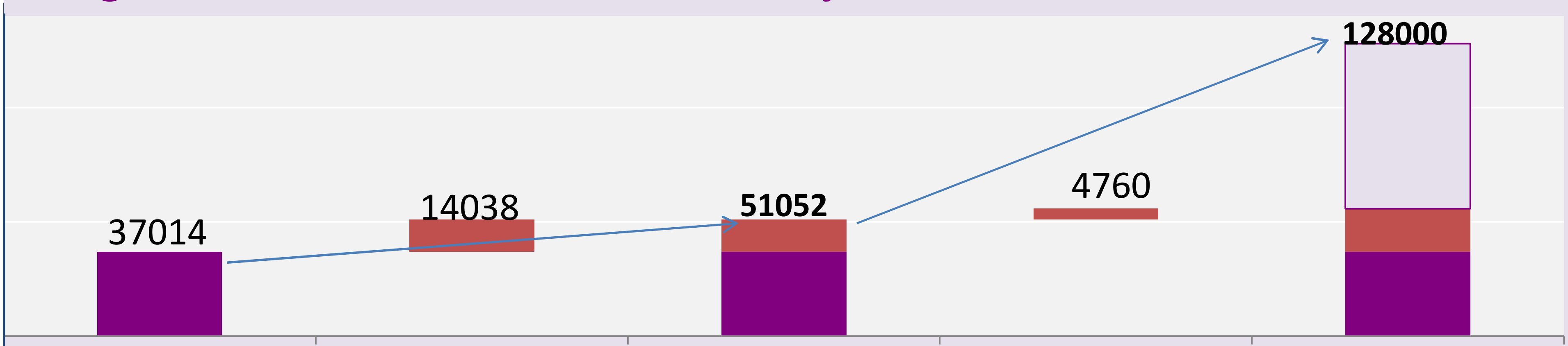

Out of 14038 MW under construction for 12th Plan of which 2160 MW commissioned upto 31.07.12

Under Construction Capacity	MW
For 12th Plan (01.08.2012)	11878
For 13th Plan (01.08.2012)	4760
Total Under Construction	**16638**
Under Award (Bulk Tender)	**6780**
Other projects under tendering	**3140**
Total XIII Plan under Award/ Bidding	**9920**

Target Capacity Addition 2012-13 4160 MW

Project/Unit	Target 2012-13	Achieved
Mauda	1000	500
Sipat	660	660
Rihand	500	500
Vindhyachal	1000	500
Vallur	500	
Jhajjar	500	
Total	**4160**	**2160**
A& N Solar & Dadri Solar	10	

2320 MW declared commercial during Q1/2012-13 including 500MW of Jhajjar

Financing NTPC's Capex

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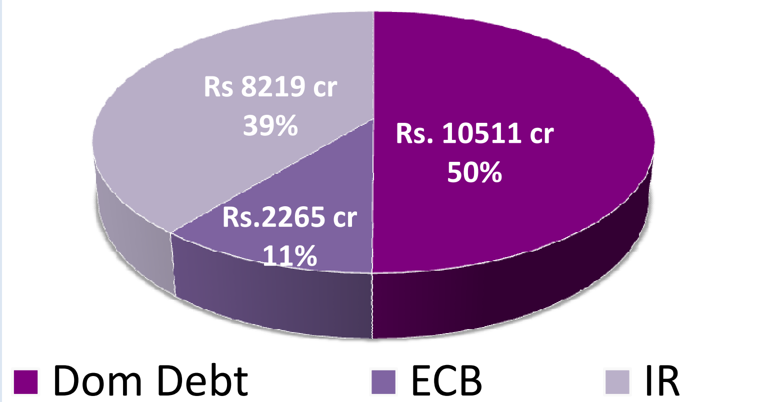
Capex Schemes	Outlay (2012-13) Rs. Crore	Capex spend (Q1 June'12) Rs. Crore
On-Going Projects	12751.13	3220.20
Completed Projects	1191.56	67.88
New Projects	2203.58	299.13
Coal Mining	1803.07	41.91
R&M Schemes	1151.32	104.82
JVs & Subsidiaries	1254.88	160.44
Other Schemes	639.46	83.70
TOTAL	20995.00	3978.07

Financing of Outlay FY 13



CAPEX Category	Projected Outlay Rs. Crore	Projected Debt Rs. Crore
Capacity Under Construction (12428 MW)	47169	33018
Capacity Under Award/ Tender/ Planning (15100 MW)	91353	63947
Coal Mine Capacity Under Planning	8952	6266
R&M Schemes	5688	3982
Total	153162	107213

Globalization

Geographical diversification fuelling growth

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Sri Lanka (Trincomalee)

- **2x250 MW coal based power project in Trincomalee through a JV Co. with Ceylon Electricity Board.**
- **Sampur site in Trincomalee region is identified for the project. Feasibility study is in advanced stages.**

Bangladesh

- **1320 MW Coal Based Power Plant at Khulna**
- **Being Developed through a 50:50 JV Co. with BPDB on BOO basis**
- **Signed JV Agreement with Bangladesh Power Development Board on 29th Jan 2012.**

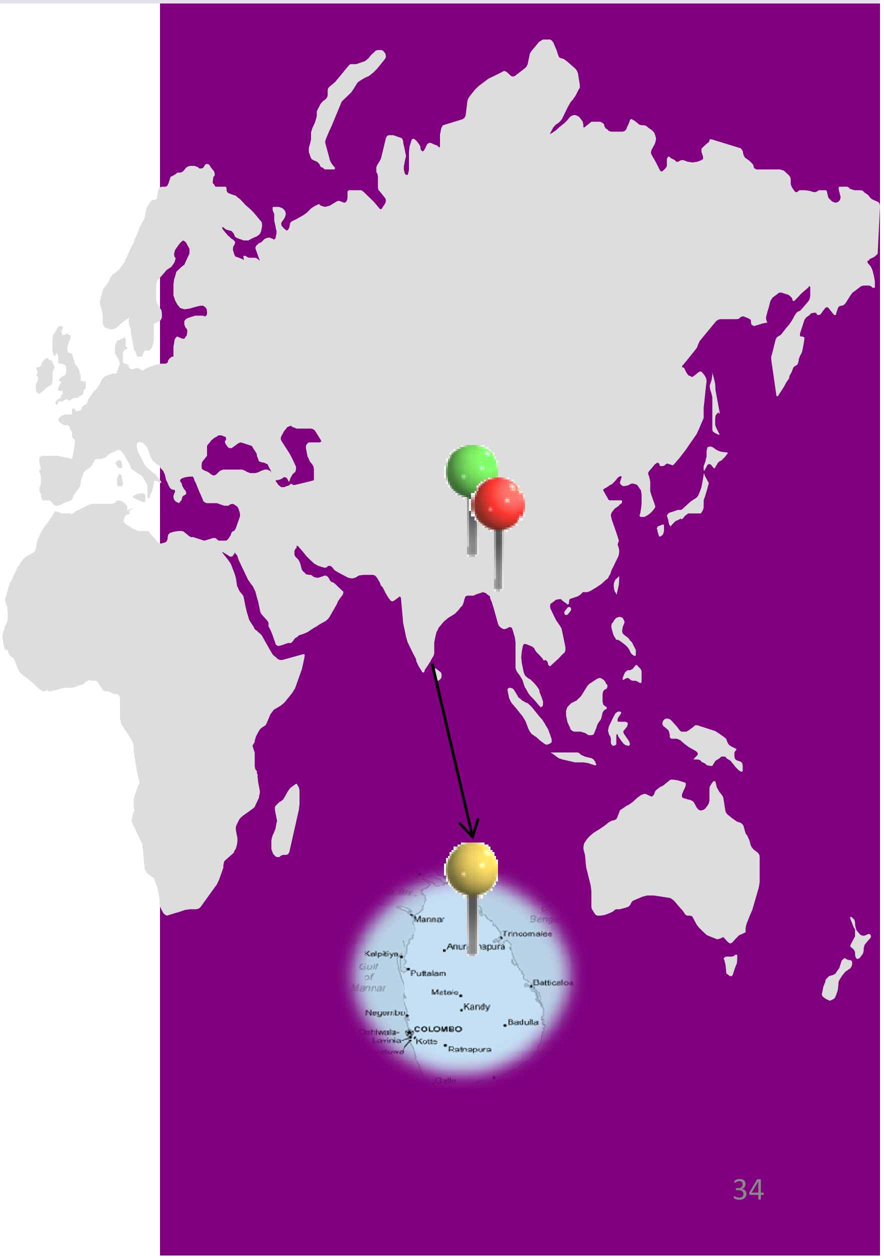
- **Consultancy Agreement with EGCB for providing O&M services for 2x120 MW Gas based power plant. This is the largest single international order received by NTPC.**

- **NVVN appointed for supplying Power to Bangladesh**

Bhutan

- **Agreement with Royal Govt. of Bhutan for preparing DPR for 620 MW Amochhu Reservoir based HEP.**

- **NVVN, appointed as the nodal agency for trading power from Bhutan.**



Presentation outline

A Maharatna Company

- NTPC Journey & Overview
- Performance Highlights
- Opportunities
- Challenges
- Sustainability initiatives

Fuel Supply & Requirement Position– Coal

Fuel tie-ups Providing Security

- **Coal Supply 2011-12 & 2010-11**

Source	Supply in MMT	
	2011-12	2010-11
Domestic	128.99	126.72
Import	12.00	10.60
Total	140.99	137.32

- **Coal Supply Q1/ 2012-13**

Source	Supply in MMT	
	Q1 /FY 13	Q1/ FY12
Domestic	33.79	30.64
Import	2.77	3.34
Total	36.56	33.98

•Domestic Coal Supply has increased by 10.3% Q1/FY13 over Q1FY 12

Coal Requirements 2012-13

	MMT
Requirement	164
Sourcing	
ACQ/ MoU	134
Bilateral/e-auction	3
Import 16MMT equiv.	27

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12th Plan Targets and Coal Requirements

Year	12-13	13-14	14-15	15-16	16-17
Domestic Coal Demand (MMT)	164	187	198	205	218
ACQ Supply (MMT)	119	119	119	119	119
LoA (MMT)	15	22	25	32	38
Supply ACQ+LOA (MMT)	134	141	144	151	157
Captive Mine	0	3	8.5	19.5	37
Supply thru e-auction/MoU (MMT)	3	3	3	3	3
Total Domestic Supply	137	147	155	174	197
Domestic Deficit	27	40	43	31	21
Eqvt. Imports (MMT)	16	24	25	19	13

Ensuring fuel security

Captive coal mines

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Six coal mining blocks allocated to NTPC

- Pakri Barwadih
- Talaipalli
- Dulanga
- Kerandari #
- Chatti Bariatu #
- Chatti Bariatu South#

Estimated geological reserves of over 3 billion tonnes

Capex Spend

Total Capex Spend on mines till Q1/ FY 13 Rs. 879.81 Crore

Target Coal Production from 5 blocks

~37MMT BY FY 17

#In principle approval of withdrawl of deallocation received from GoI
*** Request for withdrawal of deallocation pending with GoI**

Ensuring fuel security

Development of coal mines

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Pakri Barwadih Coal Block

- Environment Clearance obtained.
- Forest Clearances Stage-I & Stage-II obtained.
- Mining Area Land Acquisition Notifications are completed.
- 2536 acres of forest land in possession. Payment disbursed for 605 acres of private land.
- Mine Developer Cum-Operator (MDO) appointed and commenced work at site.
- Construction of Coal Handling Plant, R&R colony, Substation and Yard arrangement in progress.
- Expected to commence production in 2013. Annual production expected to reach peak production of 15MMT by the end of 4th year.

Ensuring fuel security

Development of coal mines

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Particulars	Coal Blocks			
	Chatti-Bariatu	Kerandari	Talaipalli	Dulanga
Environment Clearance	Obtained	Obtained	In-principle clearance obtained	In-principle clearance obtained
Forest Clearance	Stage-I & Stage-II clearance obtained	Stage-I clearance obtained	Under process	Under process
Acquisition Notifications	Completed	Completed	Completed	Completed
Appointment of MDO	Award is ready – after formal withdrawal of de-allocation	Tendering after formal withdrawal of de-allocation	Appointed	Tendering under process

MoC has conveyed in-principle approval for withdrawal of de-alloaction of Chatti-Bariatu, Chatti-Bariatu (South) and Kerandari coal blocks – formal withdrawad is awaited.

MoC has given in principle approval for allotment of additional coal blocks for four new projects of total 8460 MW capacity

Ensuring fuel security

Imports & Transportation

- 4 MMT of imported coal through Direct Tender awarded in 2011-12
- 12 MMT of additional coal to be awarded in 2012-13
- Savings of 15% to 23% in coal price from direct award of import contracts
- Work in progress for transport of coal to Farakka through inland water ways:
    - Contract for procurement of Shore Cranes, Barges, Trans-shipper and construction of Jetty and Conveyor awarded by the Contractor.
- Discussion in progress with IWAI for transporting coal to Barh & Bongaigaon projects through Indo Bangladesh Protocol Route

Ensuring fuel security

Gas Requirement & Supply

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Gas Consumption during Year 2011-12 & Q1/ 2012-13

Year	Nominal Capacity (MW)	Gas Requirement at 90% PLF	Gas consumption MMSCMD			
			APM/ PMT/ Non-APM	KG D6	RLNG	Total
Q1/ 2012-13	3605*	17.35	9.27	1.21	2.60	13.08
2011-12	3605*	17.35	8.84	1.90	2.35	13.09

* Excluding Kayamkulam

No generation loss on account of fuel shortage

Decrease in PLF is due to lower demand from the grid for RLNG & Naphtha based power due to high cost

Year	% PLF	% AVF (DC)
Q1/ 2012-13	64.63	92.63
2011-12	65.22	93.81
2010-11	71.77	92.60

Ensuring fuel security

Gas Scenario

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Prevailing Delivered Gas price & FCOG at NTPC gas stations :

Gas Type	Delivered Price (US $ / MMBtu)	FCOG (Rs/ Kwh)
APM/ PMT	4.78-5.78	2.15-2.73
Non APM Gas	6.64	3.05-3.10
KG D6	6.44-6.77	2.90-3.20
GAIL Long Term RLNG	13.00-15.72	5.85-7.43
Spot RLNG	18.36-22.54	8.43-10.65

Assumed: 1USD= Rs 55/-

Details of Gas/ RLNG tie ups for NTPC Existing Gas Stations:

Gas Type	Source/ Supplier	Contracted quantity (MMSCMD)	Contract valid till
APM/PMT gas	ONGC/ GAIL	14.48	2021/2019
Non-APM gas	ONGC/ GAIL	0.82	2016
KGD6 Gas	RIL/Niko/BPEAL	2.30	2014
RLNG-Long term	GAIL	2.0	Dec 2019
Spot / Fallback RLNG	Domestic suppliers	Based on demand form time to time	On Reasonable Endeavour basis

Land Acquisition:

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Recent initiatives

- R&R Policy, CSR-CD Policy revised
- Formulation of Initial Community Development (ICD) policy (Pre R&R for image/ rapport building)
- Exploration of consent awards /negotiated route with individual agreements
- ITIs/ Special Training Institutes being set up near projects
- Annuity Policy in lieu of employment/ rehabilitation
- Mobile Health Clinics
- Facilitation for Electricity within 5km radius as per provisions of GOI's recent policy

Status of Land Acquisition for Bulk Tendering

Project	Land Req. (acres)	Status of Land Acquisition
Nabinagar (3x660)	2832	Compensation Disbursement for GoI land started Enhanced compensation for pvt. Land completed for 1000 acres
Darlipali (2x800)	1752	Notification u/s 4,6 & 7 completed for 1279 acres of pvt. Land. Land rates finalised sec.9 under process
Gajmara (2x800)	1231	Revised sec 4 proposal approved in Jly 12 for 1005 acres pvt land. Gazette notification awaited
Lara I & II (5x800)	2857	Sec 9 notification for 7 out of 9 villages completed. Award approval for 4 villages in process u/s11

Head of Project in place at site well in advance to expedite land acquisition

Challenge: Accelerated Capacity Addition

Strategy: Multi pronged

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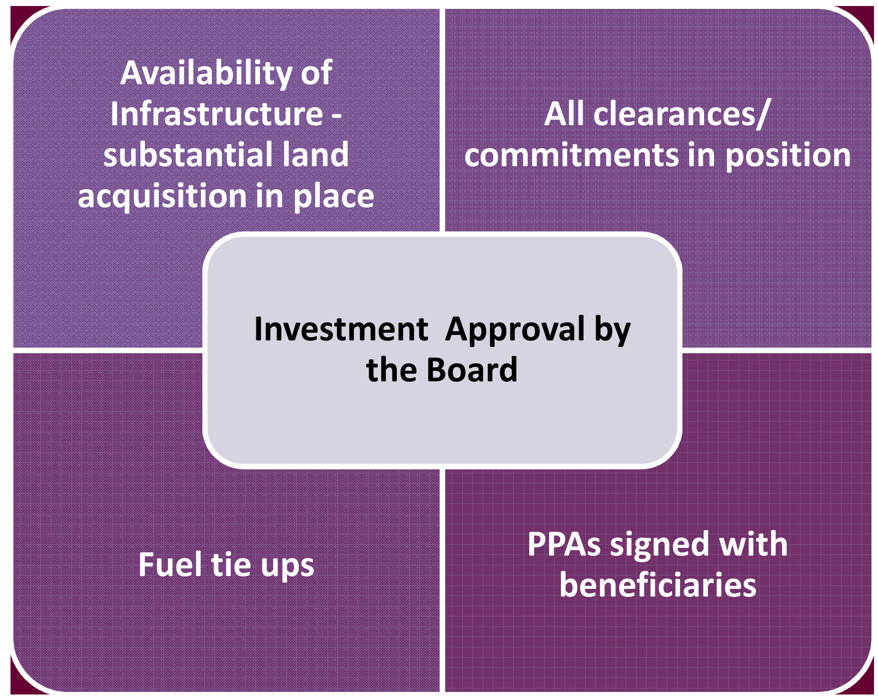
- **Bulk Tendering of 6360 MW already awarded**
- **Tender for 1320 MW on EPC basis floated.**
- **Enhanced Delegation of Power for quick decision making**
- **State of the Art Project Monitoring Centre at Corporate Office to have on-line Monitoring of Progress of Projects**
- **Adoption of new concepts like – Limited Notice to Proceed to enable start of Engineering activities before the award of main Plant award.**
- **Land acquisition cell created at Corporate centre to support the activities at Site.**



Challenge – Nursing SEBs back to health

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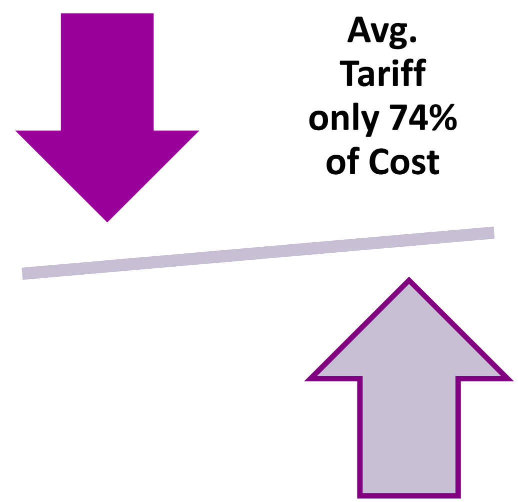
- Accumulated Losses of SEBs stand at Rs. 1,79000 crores before subsidy and Rs. 82,000 crore after subsidy for FY 2006 to FY 2010 (*Shunglu Comm.)*
- MoP initiatives to ensure sustainable financial health of SEBs
- Tariff Revision by 24 SERCs for 2012-13. 9 States/UTs have filed ARR for which tariff orders awaited
- AT&C losses declined during 5 years from 34.33% (2004-05) to 30.59% in FY 2010. (Shunglu Committee Report Dec 2011)
- Performance based R-APDRP alongwith support provided by MoP is expected to sustain the declining trend in AT&C losses
- Financial Restructuring of SEBs under consideration to provide leg room for improvements



Source: Crisil Report: Indian Consumer is able to pay

Challenges: Securing receivables & Off-take

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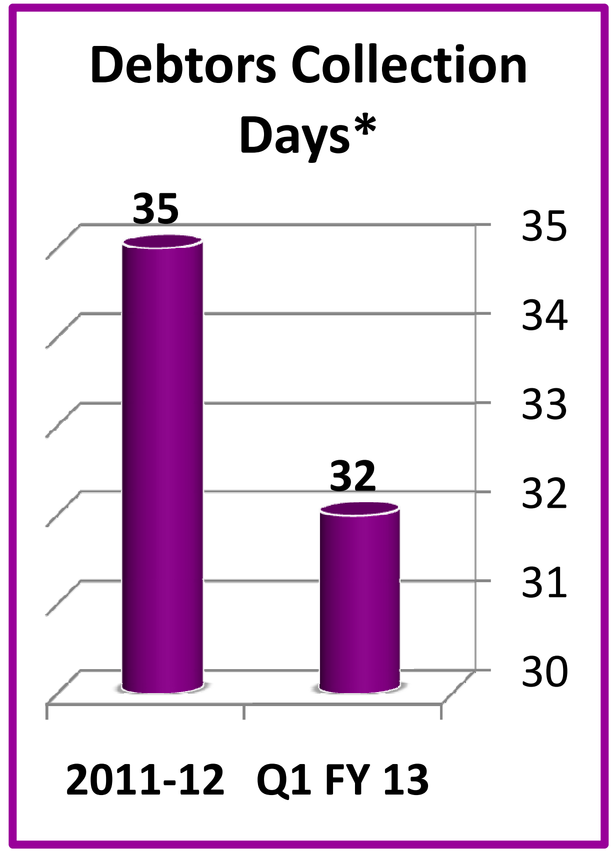
- Realized 100% payment of bills from customers for ninth year in succession
- Revised Incentive scheme to ensure timely collection of dues
- NTPC's billing expected to increase substantially in 5 years – receivables secured through payment security mechanism.
- State utilities required to establish LCs in NTPC's favour to cover 105% of the average monthly billing. As on March 2012, L/Cs in place for Rs. 4857 Crore.
- Supplementary agreements signed for first charge over customers' receivables after 2016
- NTPC's Average Tariff of Power is Rs.2.96/Kwh for 2011-12 (Q1/FY 2012-13 Rs. 2.94/Kwh), ensuring least risk of power off-take in the sector
- Future Projects are also likely to be low cost as most of projects are expansion projects as well as pit head.



* Debtors Net of Provisions excluding unbilled revenues

Competitive Advantage…..

Sustaining its status of low cost power producer

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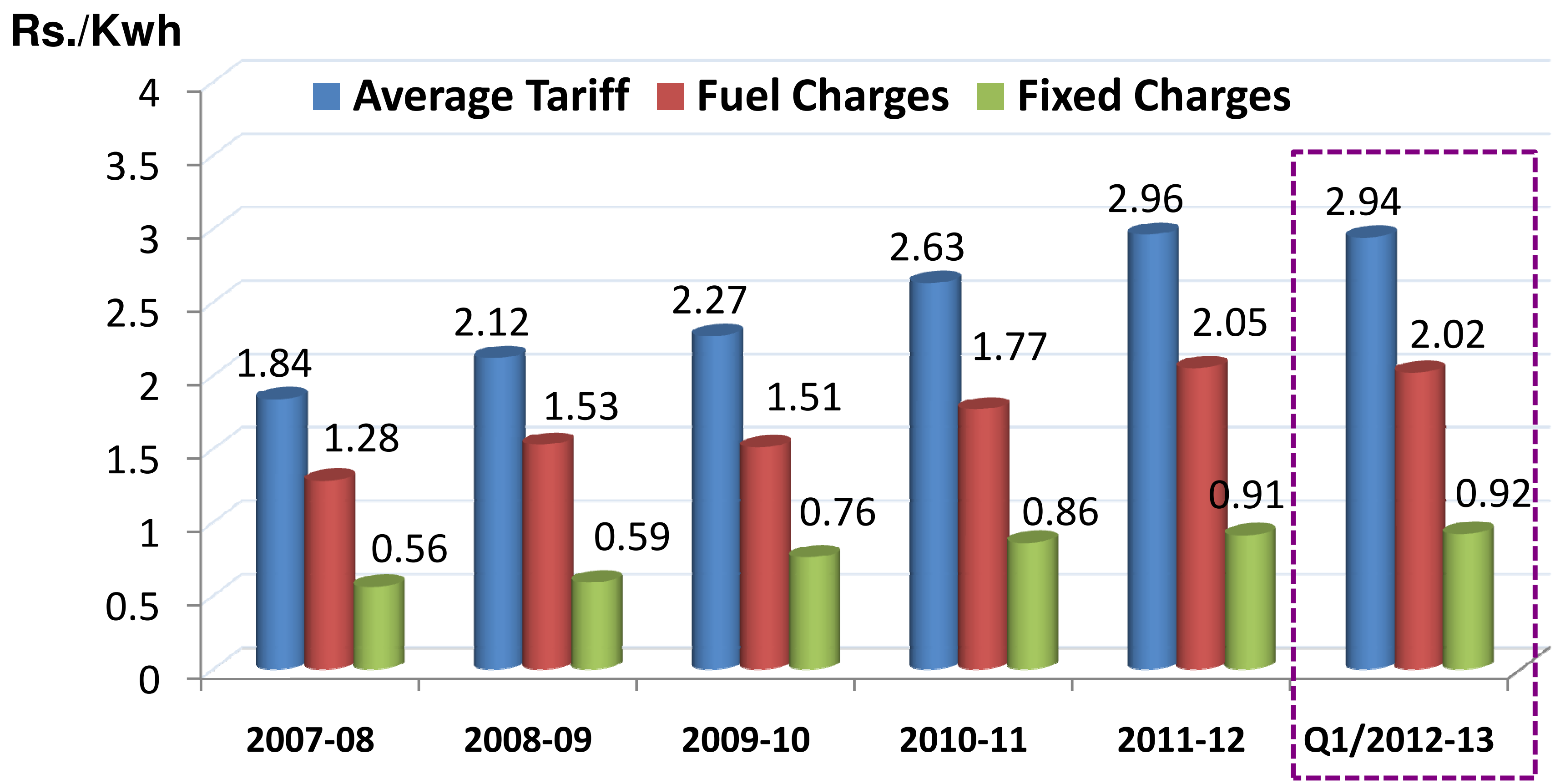

Coal based plants close to pit head stations ensure competitive variable cost of generation

Fund Mobilization

Strategy

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Capital Structure

Equity:

- ❑New projects financed with Debt equity ratio of 70:30.
- ❑Internal accruals sufficient to finance equity portion of scheduled investment in NTPC
- ❑Deployment of equity in Subsidiaries/JVs selectively-preferably with control retention

Debt Funding

- ❑NTPC has "Most Favoured Borrower" status due to:
  - ❑Low gearing and healthy coverage ratios
  - ❑Debt servicing ability to remain strong due to certainty of revenues based on cost plus regime
- ❑Long Term debt preferred to match project cash flows-to be raised from domestic/international markets
- ❑Projects executed by Subsidiaries and JVs to be financed under project finance route achieved by signing of Loan Agreements with consortium of 16 banks
- ❑ Financial Closure of 1320 MW Meja Thermal Power Project on JV route. Financial Closure of 390 MW of another JV KBUNL achieved in 2011-12

✓ Supported by highest credit ratings – *BBB- with Negative Outlook by Standard and Poors' and Fitch*

✓Highest ratings "AAA" assigned by domestic rating agencies CRISIL , ICRA and CARE

Fund Mobilization

Strong ratios ensures debt at optimal cost

NTPC
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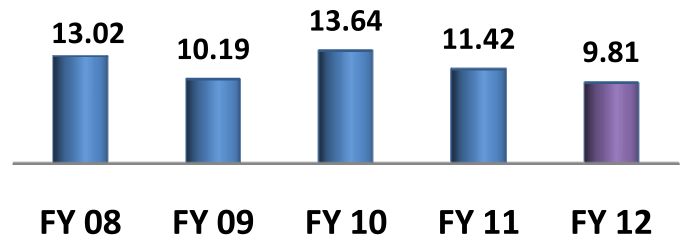
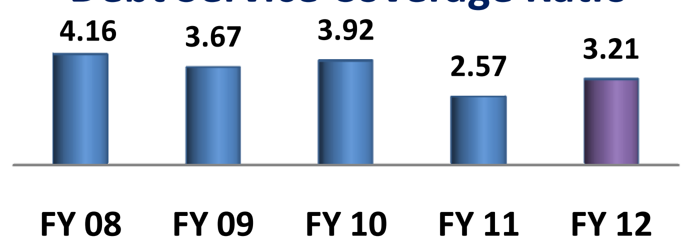
Debt Funding

- ❑Cumulative Domestic loan tied up stand at Rs. 56729.35 crore as on 31.07.2012
- ❑Total Available Undrawn amount (Domestic Loans) as on 31.07.2012 :Rs. 17,450 crore
- ❑US$ 500 million Fixed Rate Senior Unsecured Notes raised after a robust book building
- ❑Tied up US$ 100 million with Mizuho and Eur 72.5 million with Corporate Bank and KfW
- ❑MTN programme being upgraded to USD 2 Bn. USD 800 Mn already drawn
- ❑Total Domestic Bond raising Capacity more than Rs.50000 Crore. Issued domestic bonds for Rs.830 crore during 2011-12
- ❑Rs 296 crore saved by restructuring existing debt

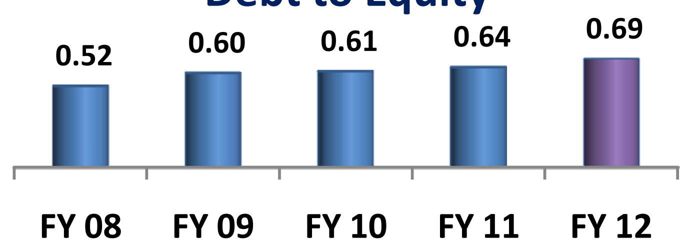
Interest Coverage Ratio



Debt Service Coverage Ratio



Debt to Equity



Weighted Avg. Cost of Borrowings	
2011-12	Q1/2012-13
7.7649%	7.7243%

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A Maharatna Company

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- **Sustainability initiatives**

Challenges of Sustainability

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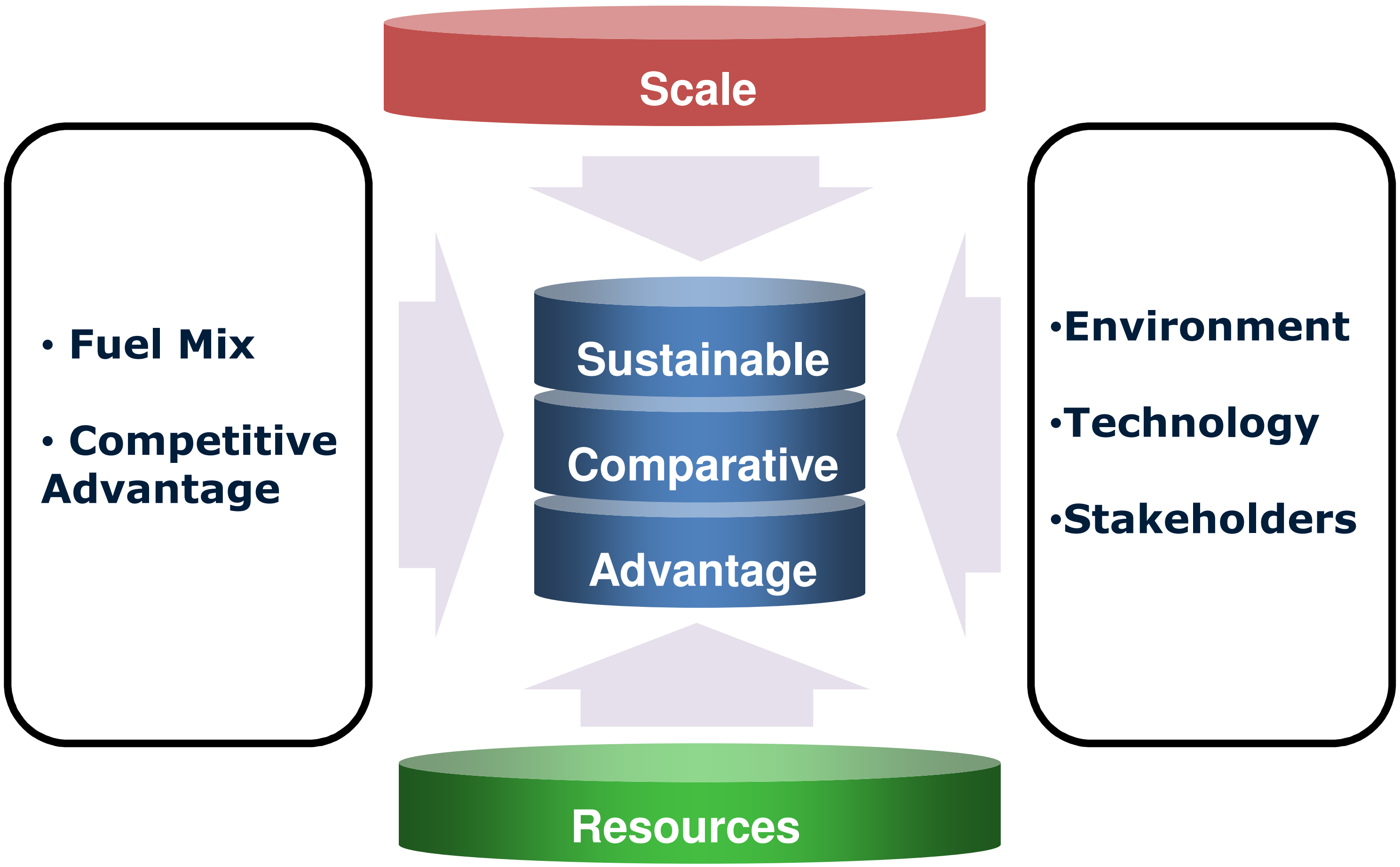

Sustained Growth can be assured only if we have Long Term Competitive Advantage

Renewable & Nuclear Energy

Reducing Carbon footprints

Own Basket

- Basket of 1000MW under development
- 300 MW being targetted for completion by 2017
- Of this 105 MW solar capacity by 2017
- 5 MW each at A&N and Dadri in advanced stage of completion

In partnership

- Pan-Asian Renewable Private Limited, JVC to initially develop renewable energy projects of about 500 MW
- "Anushakti" formed with 51% stake of NPCIL and 49% stake of NTPC for developing nuclear power projects

JNNSM

- NVVN as nodal agency for JNNS Mission implementing 1050 MW of solar capacity.
- Contracts awarded for 1000 MW
- 173 MW capacity of solar PV commissioned
- 861 MW solar projects scheduled for commissioning over next 2 years

Environmental Initiatives

More than 33 million tons of CO_2 has been avoided in NTPC

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Technology choices	• Advanced and high efficiency technologies. • NTPC's Ist Super-Critical unit of 660 MW is declared on commercial operation at Sipat-I Power Project • Majority of the coal based capacities planned under 12th plan period will be based on super critical technologies
Monitoring Systems	• CO_2 measurement systems being installed at all NTPC stations in the chimney stacks • 61 Ambient Air Quality Monitoring System(AAQMS) installed in NTPC stations
Energy Conservation	• Online energy management system at 15 stations to reduce auxiliary power consumption • Energy Audits
Afforestation	• Creation of green wealth of ~19 million trees

1.96 Million Tons CO_2 avoided in 2011-12

Ash Management

Waste Product to Bye-Product

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Achieved ash utilization of 55.01% during 2011-12

625 million ash bricks manufactured in pilot ash brick manufacturing plants.

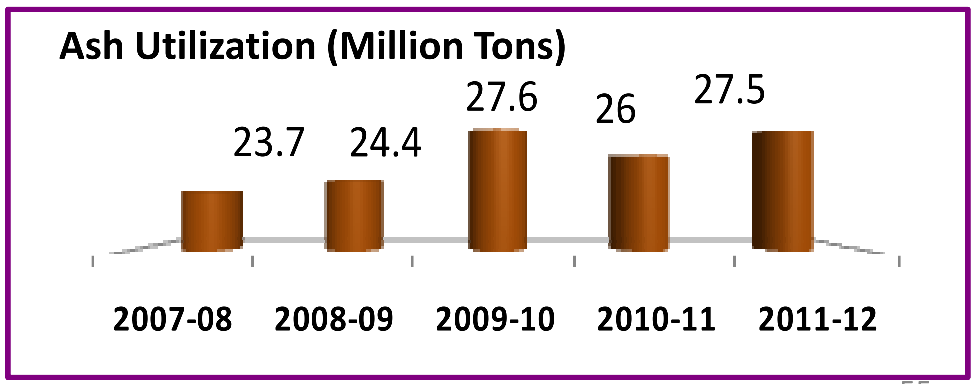
Export of Ash from Farakka and Rihand stations.

MoU has been signed with Research Designs & Standard Organization (RDSO), Lucknow to explore use of ash in Railway Embankment. CRRI has been awarded consultancy for design of railway embankment with ash.

A documentary film on "Ash based building products" been made to promote and propagate its usage.

Inclusion of chapter on Fly Ash in Bachelor of Engg. Curriculum – Jamia Millia Islamia University, IIT Kanpur & IIT Kharagpur.

9.06 million tons fly ash issued to cement & other industries in 2011-12.



Technology progression

Increased efficiency and greater environmental protection

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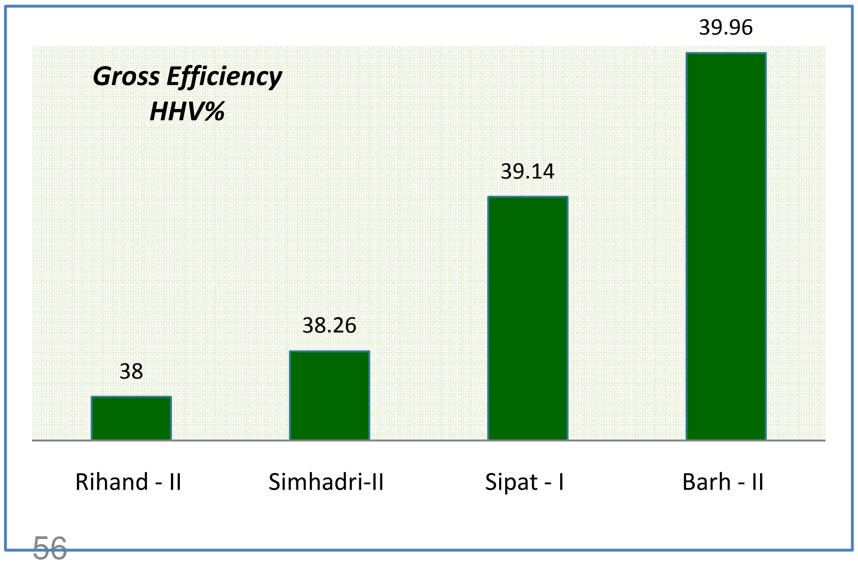
Leader in introducing new technologies in the power sector

Technologies Introduced

- High Voltage Direct Current Technology
- Distributed Digital Control – MIS
- Dry Ash extraction and disposal system
- 765 KV AC switchyard
- Tunnel Boring machines

Technologies under development

- Development of IGCC suitable for Indian coal
- Use of advanced technologies in the renovation and modernization of aging power stations
- Induction of efficient Advanced Class gas turbines
- High concentration slurry disposal system
- Flue gas desulphurisation



Induction of high efficiency equipment, including supercritical and ultra-supercritical machines

- 1980 MW (3x660 MW) Super-critical capacity in operation
- 9660 MW (800x3 + 11x660MW) super-critical capacity under construction
- 6780 MW super-critical capacity under bulk tender award/ clearances

Investing in R&D and technology

NETRA: 16 Patent Applications filed so far, 1 obtained

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NTPC Energy Technology Research Alliance

Efficiency Improvement & Cost reduction	Climate Change	New & Renewable Energy

Efficiency Improvement & Cost reduction

- ✓ Developing waste heat recovery from flue gas
- ✓ Innovative ammonia cycle for low grade heat utilization
- ✓ Waste Management

Climate Change

- ✓ Developing technologies CO_2 fixation
- ✓ Study of CO_2 capture technology (With IIT Guwahati)
- ✓ Study of CO_2 storage technology (With IIT Kharagpur)
- ✓ PSA based CO_2 capture technology (With IIT Mumbai, IIP Dehradun, NEERI & CSMRI Bhavnagar).

New & Renewable Energy

- ✓ In-house development of innovative solar thermal for power and air conditioning
- ✓ 1 MW Solar thermal plant being developed
- ✓ Mou with KfW, Germany for underatking studies on Solar stations

- ECBC (Energy Conservation Building Code) compliant building
- ISO/NABL 17025 Certified Labs

Intend to invest up to 1% of distributable profit for R&D Activities and Climate Change studies

Extensive engagement with society

Building social capital- Going beyond generation of Power

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Skill Creation

- Adopted 17 ITIs at different locations
- Sponsored around 750 youth from villages in the vicinity of NTPC units for ITI training .
- Setting up Solapur Power Training Institute in Maharashtra to provide skill development for power generation and transmission
- 800 Students benefitted from Information and Communication Technology (ICT) Centre for physically challenged students at Delhi University by NTPC Foundation

Preserving Heritage

Conservation of selected National Monuments in association with ASI

Providing Health Care

Gender Justice

NTPC is committed to contribute 0.5% of Net Profit towards CSR Activities

"Can do it" culture drives excellence

NTPC
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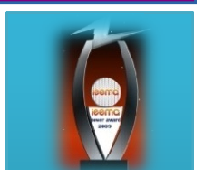
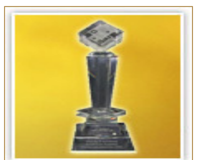
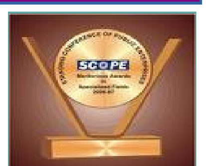
Ability to attract and retain highly skilled employees

- "People First" approach
- Strong brand name
- Industry leadership position
- Wide range of growth opportunities
- Focus on long-term professional development

GREAT PLACE TO WORK® INSTITUTE INDIA
BEST companies to work for 2012

Consistent Independent Recognition of NTPC's Excellence

Leading Power company		Corporate Excellence		Project management	Corporate Finance	Corporate Governance	Environment management	
PLATTS TOP 250 GLOBAL ENERGY COMPANY 2010	 Golden Peacock Award for CSR 2012	 Dun & Bradstreet American Express Corporate Award	 SCOPE Meritorious Award	IPMA AWARD 2005 & 2008	Best CFO ICAI AWARD	ICSI National Award For Excellence in Corporate Governance	CII - ITC SUSTAINABILITY AWARD 2008	 Greentech Environment Excellence Award 2007

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NTPC believes in..

Sustainable Growth

While being ..

Sensitive to Society

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